

REMARKS

Applicants have now had an opportunity to carefully consider the Examiner's comments set forth in the Office Action of December 1, 2004.

All of the Examiner's objections and rejections are traversed.

Reconsideration is respectfully requested.

The Office Action:

Claims 1-4, 8, 9, 12-14, 16-17 and 21-23 remain in this application. Claims 5-7, 10-11 and 19 were previously cancelled. Claims 15, 18 and 20 is currently canceled. Claims 1, 8 and 17 are currently amended. Claims 2-4, 9, 12-14, 16, and 21-23 remain as originally or previously presented.

Claim Objections:

Claim 15 was objected to under 37 CFR 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Claim 15 is presently canceled to overcome the Examiner's objection. Accordingly, it is respectfully submitted that this objection be withdrawn by the Examiner.

Claim Rejections by Examiner:

Claims 8 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-3, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeno et al. (U.S. Patent 5,135,891) in view of Jedlicka et al. (U.S. Patent 5,604,362).

Claims 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeno et al. in view of Jedlicka et al. as applied to claim 1 above, and further in view of McColgin et al. (U.S. Patent 4,553,153).

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeno et al. in view of Jedlicka et al. as applied to claim 1 above, and further in view of Park et al. (U.S. Patent 5,053,298).

Claims 8, 9 12-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeno et al. in view of Jedlicka et al. as applied to claim 1 above, and further in view of Koizumi et al. (U.S. Patent 5,698,892) and McColgin et al. (U.S. Patent 4,553,153).

Claims 1-4, 8, 9, 12-14, 16-17 and 21-23 are now in condition for allowance as amended.

Regarding Claims 8 and 17, as rejected under 35 U.S.C.112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, these claims have been amended to remove the term "preferential." Accordingly, these claims clearly define the metes and bounds of the claimed subject matter and are definite as required by 35 U.S.C.112, second paragraph. The Examiner is respectfully requested to withdraw this rejection.

Regarding Claims 1-3, 21 and 22 as rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeno et al. (U.S. Patent 5,135,891) in view of Jedlicka et al. (U.S. Patent 5,604,362), independent Claim 1 has been amended to include the feature of an inter-filter layer composed of an optically transmissive, acrylic material.

Furthermore, Claim 1 includes the feature of at least one of the first filter layer and the second filter layer containing a pigment. It is respectfully submitted that Claim 1 and all claims that depend therefrom, Claims 2-4 and 21-23, are in condition for allowance for the reason discussed below.

Regarding Claim 1, as the Examiner has indicated in the last Office Action, at page 3, paragraph 4, Ikeno et al. does not disclose a filter layer containing pigments.

The Office Action goes on further to state Jedlicka et al. teaches a filter layer containing pigments at col. 2, lines 1-19. The Examiner asserts that it would have been obvious at the time of the invention to incorporate the method of Ikeno et al., with the pigments of Jedlicka et al. because pigments and dyes are considered art-recognized equivalents at the time of the invention and one of ordinary skill in the art would be motivated to make such a modification based on what is more readily available.

The Applicant traverses the Examiner's combination of the teachings of Ikeno

et al. and Jedlicka et al. as discussed in the preceding paragraph. Specifically, Jedlicka et al. does not teach the use of a pigmented filter layer as claimed by the Applicant, Jedlicka et al. simply asserts in the background section of the disclosure at col. 2, lines 5-19, that "it is well known to dope the polyimide with either a pigment or dye of the desired color, and these dopants are readily commercially available." As was discussed in the last response by the Applicant, it is to be understood that the Applicant, and one of ordinary skill in the art, regards dyes and pigments as fundamentally different as applied to the claimed subject matter. Dyes are non discrete molecules designed to absorb specific frequencies of light and dyes are dissolved into a medium. Dyes are much smaller in size than pigments. Dyes typically have problems associated with breakdown and fading as they age. Pigments, on the other hand, are discrete particles and relatively large, as compared with dyes, with particles about 50 to 100 nanometers in diameter. Pigments are not dissolved, but dispersed into a medium. Pigments perform better than dyes as related to fading and aging issues. In addition, pigments can be applied in a more cost efficient manner as compared to dyes. As related to the currently claimed subject matter, the size of the dopant material is a factor for consideration when applying an inert-filter layer where subsequent filter layers will be applied. The size of the dopant material can have an effect on the smoothness of any subsequent layers formed. The larger pigment dopant particles have a greater effect on the smoothness of subsequent layers compared to the much smaller dye dopant particles.

Accordingly, it would not have been obvious to one of ordinary skill in the art at the time of the invention to include a pigmented filter layer that is subject to being covered with an inter-filter layer before another filter layer is formed.

As the Examiner has indicated in the last Office Action, at page 8, with regard to Claim 14 and the presently claimed subject matter of Claim 1, an inter-filter layer containing acrylic is not disclosed by Ikeno et al. Furthermore, Jedlicka et al. and Koizumi et al. do not disclose an inter-filter layer containing acrylic as claimed. As the Examiner has indicated, McColgin et al. teaches a layer with acrylic at col. 5, lines 35-62, with the use of a dyed color filter, col. 9, lines 3-64. The Applicant traverses this rejection because McColgin et al. teaches the use of an acrylic layer contiguous with both a protective layer and a layer that provides an array of color

filters, at col. 8, lines 4-16. The Applicant's claimed subject matter includes an inter-filter layer that is applied over a filter layer. This inter-filter layer includes a composition of acrylic. Claim 1, and all claims that depend therefrom, are distinguishable from the acrylic layer taught by McColgin et al. because McColgin et al. does not teach the use of an acrylic layer between filters as claimed by the Applicant. McColgin et al. teaches, at Fig. 2, the use of a planarizing layer over the substrate and before a color filter layer is applied. Furthermore, McColgin et al. teaches the use of a dyed color filter arrangement at col. 9, lines 3-64. In contrast, the Applicant's claimed subject matter includes one or more pigmented filter layers. As discussed in the previous response by the Applicant, filed October 5, 2004, it is to be understood that the Applicant, and one of ordinary skill in the art, regards dyes and pigments as fundamentally different as applied to the claimed subject matter. Dyes are non discrete molecules designed to absorb specific frequencies of light and dyes are dissolved into a medium. Dyes are much smaller in size than pigments. Dyes typically have problems associated with breakdown and fading as they age. Pigments, on the other hand, are discrete particles and relatively large, as compared with dyes, with particles about 50 to 100 nanometers in diameter. Pigments are not dissolved, but dispersed into a medium. Pigments perform better than dyes as related to fading and aging issues. In addition, pigments can be applied in a more cost efficient manner as compared to dyes.

For the reasons discussed above, Ikeno et al. in view of Jedlicka et al. do not disclose/teach each and every element of claims 1-3, 21 and 22. Accordingly, the Examiner is respectfully requested to withdraw this rejection to Claims 1-3, 21 and 22.

Regarding Claim 4 as being rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeno et al. in view of Jedlicka et al. as applied to claim 1 above, and further in view of McColgin et al. (U.S. Patent 4,553,153), for the reasons discussed above regarding Claim 1, this rejection is traversed by the Applicant. Claim 4 is dependent on independent Claim 1; accordingly, the Examiner is respectfully requested to withdraw this rejection.

Regarding Claim 23 as being rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeno et al. in view of Jedlicka et al. as applied to claim 1 above, and further in view of Park et al. (U.S. Patent 5,053,298), for the reasons discussed

above regarding Claim 1, this rejection is traversed by the Applicant. Claim 23 is dependent on independent Claim 1; accordingly, the Examiner is respectively requested to withdraw this rejection.

Regarding Claims 8, 9 and 12-17 as being rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeno et al. in view of Jedlicka et al. as applied to claim 1 above, and further in view of Koizumi et al. (U.S. Patent 5,698,892) and McColgin et al. (U.S. Patent 4,553,153).

Regarding independent Claims 8 and 17, these claims include the claimed features of an inter-filter layer composed of an optically transmissive acrylic material and at least one of the first filter layer and the second filter layer containing a pigment. These claimed features are also within the body of Claim 1 and the Applicant traverses the rejection of independent Claims 8 and 17, and all claims that depend therefrom (Claims 9 and 12-16) for the reasons discussed above with regard to Claim 1. Specifically, the Applicant traverses the Examiner's combination of the teachings of Ikeno et al. and Jedlicka et al. as discussed with regard to Claim 1 above. As the Examiner has indicated in the last Office Action, at page 8, with regard to Claim 14 and the presently claimed subject matter of Claim 1, an inter-filter layer containing acrylic is not disclosed by Ikeno et al.. Furthermore, Jedlicka et al. and Koizumi et al. do not disclose an inter-filter layer containing acrylic as claimed. As the Examiner has indicated, McColgin et al. teaches a layer with acrylic at col. 5, lines 35-62, with the use of a dyed color filter, col. 9, lines 3-64.

The Applicant traverses this rejection because McColgin et al. teaches the use of an acrylic layer contiguous with both a protective layer and a layer that provides an array of color filters, at col. 8, lines 4-16. The Applicant's claimed subject matter includes an inter-filter layer that is applied over a filter layer. This inter-filter layer includes a composition of acrylic. Claims 8 and 17, and all claims that depend therefrom, are distinguishable from the acrylic layer taught by McColgin et al. because McColgin et al. does not teach the use of an acrylic layer between filters as claimed by the Applicant. McColgin et al. teaches, at Fig. 2, the use of a planarizing layer over the substrate and before a color filter layer is applied. Furthermore, McColgin et al. teaches the use of a dyed color filter arrangement at col. 9, lines 3-64. In contrast, the Applicant's claimed subject matter includes one or more pigmented filter layers. As discussed in the previous response by the

Applicant, filed October 5, 2004, it is to be understood that the Applicant, and one of ordinary skill in the art, regards dyes and pigments as fundamentally different as applied to the claimed subject matter. Dyes are non discrete molecules designed to absorb specific frequencies of light and dyes are dissolved into a medium. Dyes are much smaller in size than pigments. Dyes typically have problems associated with breakdown and fading as they age. Pigments, on the other hand, are discrete particles and relatively large, as compared with dyes, with particles about 50 to 100 nanometers in diameter. Pigments are not dissolved, but dispersed into a medium. Pigments perform better than dyes as related to fading and aging issues. In addition, pigments can be applied in a more cost efficient manner as compared to dyes.

For the reasons discussed above, Ikeno et al. in view of Jedkicka et al., Koizumi et al. and McColgin et al. do not disclose/teach each and every element of claims 8 and 17. Accordingly, the Examiner is respectfully requested to withdraw this rejection to Claims 8 and 17.

Regarding Claims 9, 12-14 and 16, these claims all depend from either independent Claim 8 or independent Claim 17. Accordingly, the Examiner is respectfully requested to withdraw the rejection of these claims for the reasons discussed above with regard to independent Claims 8 and 17.

Regarding Claim 15, this claim is presently canceled. Accordingly, the Examiner is respectfully requested to withdraw the rejection.

It is respectfully submitted that Claim 8 and 17, and all claims that depend therefrom, Claims 9 and 12-16 are in condition for allowance for the reasons discussed above.

CONCLUSION

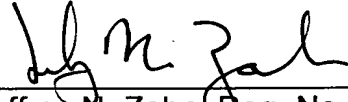
For the reasons detailed above, it is submitted all claims remaining in the application (Claims 1-4, 8, 9, 12-14, 16-17 and 21-23) are now in condition for allowance. The foregoing comments do not require unnecessary additional search or examination.

The undersigned attorney of record hereby authorizes the charging of any necessary fees, other than the issue fee, to Xerox Deposit Account No. 24-0037.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he/she is hereby authorized to call Jeffrey N. Zahn, at Telephone Number (216) 861-5582.

Respectfully submitted,

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